Description

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to a manpower vehicle driven by body-weight, such as two-wheel-vehicle, three-wheel-vehicle, four-wheel-vehicle, water-bicycle, small boat and manpower aircraft, etc.

[0003] 2. Description of the Related Art

[0004] Today, except handcart, all riding vehicles such as one-wheel-vehicle, two-wheel-vehicle, three-wheel vehicle and that are pedaled by leg, driven by leg force. If the driving time is longer or a load is much more weight, or the speed is going to increase, or a person pedal vehicle up a inclined roadway, he must consume his body energy continually or increase the driving force ceaselessly, which makes him feel tired quickly, so the main disadvantage of manpower drive vehicle is that it is restricted by leg force, the driving force is little, the energy consumed is more, is difficult to keep the original drive power longer, and the speed is not fast. So people has been exploring how to increase the driving force of the manpower drive vehicle since the bicycle was invented 200 years ago. Then as a result, the motorcycle and auxiliary drive vehicle were invented and developed, but they must use a drive device of internal-combustion engine or electromotor which must consume other energy, and which leads their volume and weight increased. So they can not replace manpower drive vehicle that consumes no other energy. For this motive, people are exploring ceaselessly and some gear change mechanisms are invented, the material and structure of wheel or bodywork are improved in order to decrease weight, increase transmission efficiency, lessen manpower consumed and increase speed. But all these improvement can not achieve the purpose of increasing the driving force without outside energy being consumed.

[0005] All bicycle riders can experience that when they are going down an inclined roadway, the bicycle will move down automatically and its speed will be greater and greater without pedaling by feet, it is the force of weight that is working. During this process, riders consume no outside